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EXAMINER

KISS, ERIC B

ART UNIT PAPER NUMBER

2122

DATE MAILED: 03/27/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

81

Office Action Summary

Application No.

09/583,672

Applicant(s)

HODGE, BRUCE

Examiner

Eric B. Kiss

Art Unit

2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. The amendment of February 19, 2003, has been received and entered, with the exceptions noted below. Claims 1-21 are pending.

Applicant's amendment to replace the paragraph beginning at page 7, line 4, in the specification has not been entered. The corresponding location in the specification is not the beginning of a paragraph.

Applicant's amendment to replace the paragraph beginning at page 20, line 4, in the specification has not been entered. The corresponding location in the specification is not the beginning of a paragraph.

2. Applicant has requested evidence of publication date for the *Simonyi* and *Kuslich* articles. The publication dates appear on the copies provided to the Applicant with the previous office action as clarified below. Accordingly, new copies of the cited publications are not being furnished with this office action.

The *Simonyi* article was retrieved using the Internet Archive® Wayback Machine (accessible at <URL: <http://web.archive.org>>), which retrieves archived copies of web pages. The URL at the bottom of the printout specifies the date that the retrieved web page was archived in the following format: YYYYMMDDhhmmss. Thus, the *Simonyi* article was archived on February 16, 1997, at approximately 9:44am.

The publication date of the *Kuslich* article can be found near the bottom of the last page, and appears as "(3.98)", indicating March 1998.

Response to Amendment

3. The rejection under 35 U.S.C. § 112, second paragraph, based on indefiniteness, as detailed in the previous office action, is withdrawn in view of Applicant's amendment.

Response to Arguments

4. Applicant's arguments filed February 19, 2003, have been fully considered but they are not persuasive.

5. In response to applicant's argument on page 8, paragraphs 2 and 4, that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., including any object types not limited by a protocol scheme only) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

6. Applicant's arguments with respect to the *Simonyi* and *Kuslich* references as applied to claims 1, 3-6, 8, and 15-17 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

Art Unit: 2122

7. The corrected or substitute drawings were received on February 19, 2003. These drawings are considered informal and are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Specification

8. The Applicant may refer to the general state of the art and the advance thereover made by his or her invention, but he or she is not permitted to make derogatory remarks concerning the inventions of others. Derogatory remarks are statements disparaging the products or processes of any particular person other than the applicant, or statements as to the merits or validity of applications or patents of another person. Mere comparisons with the prior art are not considered to be disparaging, per se. See MPEP § 608.01(r). In this case, the Applicant has made derogatory statements with regards to ODBC developed by Microsoft Corporation (see Background of the Invention, paragraph 1, lines 8-11) and the scripting languages of PERL developed by Larry Wall et al. and JAVA developed by Sun Microsystems, Inc. (see Background of the Invention, paragraph 2, lines 1-4). Applicant is required to remove or appropriately amend these cited statements.

Claim Objections

9. Applicant is advised that should claim 12 be found allowable, claim 14 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the

same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 20 and 21, while applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). In this case, the generally accepted meaning of “programming language” is a grammar in which a program may be defined. As such, a programming language can be used to define actions to be performed by a computer system upon execution of a program, but cannot perform any concrete function, such as operating on an object, instantiating an object, or reading an object identifier declaration as claimed. As these functions are conventionally performed by an interpreter or a compiler, the limitation “programming language” is subsequently treated as referring to a compiler or an interpreter for the purpose of further examination.

Claim Rejections - 35 USC § 102

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. Claims 1, 7, 9, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by T. Berners-Lee et al., "Universal Resource Identifiers (URI): Generic Syntax," August 1998 (hereinafter *Berners-Lee*).

As per claims 1 and 7, *Berners-Lee* discloses a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine (inherent in implementing Uniform Resource Identifiers as described; an example of a storage device – local cache – is mentioned in the last sentence of page 3) to perform method steps for implementing an object type-declaration syntax, comprising: allowing a type declaration (scheme) in a programming language to be embedded within an object identifier declaration (Uniform Resource Identifier); and allowing the type declaration to be delimited from the object identifier declaration using a joint attribute (a double-slash "//"; see page 11, section 3 "URI Syntactic Components").

As per claims 9 and 17, *Berners-Lee* further discloses the type declaration including a hypertext markup language object type comprising: an object identifier (for example, a web page address); a hypertext markup language object type indicator ("html" file extension) prepended with an identifier name (filename portion preceding the file extension); and a joint attribute associating the object identifier with the object type

Art Unit: 2122

indicator (a dot “.” between the object type indicator (file extension) and the rest of the address; see the third example listed in section 1.3 “Example URI” on page 4).

14. Claims 1, 2, 11-16, 18, 20, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Andrew C. Staugaard, Jr., “Structured and Object-Oriented Techniques, An Introduction Using C++,” 1997, Prentice-Hall, Inc. (hereinafter *Staugaard*).

As per claim 1, *Staugaard* discloses a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine (inherently taught as part of the system and compiler description, which includes a description of storing program files with various file extensions; see pages 33-34) to perform method steps for implementing an object type-declaration syntax, comprising: allowing a type declaration (class) in a programming language to be embedded within an object identifier declaration (variable object definition); and allowing the type declaration to be delimited from the object identifier declaration using a joint attribute (a space delimits the class from the variable object identifier; see section 2.4 on pages 54-65, and in particular, the description of Defining Variable Objects on pages 58-59).

As per claim 2, *Staugaard* further discloses allowing the type declaration in a programming language compiler to be embedded within an object identifier declaration (C++ employs a compiler; see page 33, paragraph 1).

As per claims 11-14, *Staugaard* further discloses the joint attribute concatenated to the type declaration and the object identifier declaration concatenated to the joint attribute (the class and variable object identifier are both adjacent to the same delimiting

Art Unit: 2122

space character; see, for example, the definitions of variables *V*, *I*, and *R*, on the bottom of page 59).

As per claim 15, *Staugaard* further discloses the object identifier declaration including dynamically evaluated expressions (see “Defining Class Object Pointers” on pages 564-565, and in particular, see the format for defining dynamic object pointers on page 564).

As per claim 16, *Staugaard* discloses a method of declaring an object type in a programming language, comprising: embedding an object type indicator with an object identifier name, wherein the object identifier name is interpreted by a machine as having the object type indicator (see section 2.4 on pages 54-65, and in particular, the description of Defining Variable Objects on pages 58-59).

As per claim 18, *Staugaard* further discloses joining the object type indicator with the object identifier with a joint symbol (the class and variable object identifier are both adjacent to the same delimiting space character; see, for example, the definitions of variables *V*, *I*, and *R*, on the bottom of page 59).

As per claim 20, *Staugaard* further discloses allowing the compiler to operate on an object declared in the type declaration without an explicit call to construct the object (C++ compilers allow a value to be assigned to a variable within the type declaration without requiring a separate (explicit) type declaration; see description of an initializing value on pages 58-59).

As per claim 21, *Staugaard* further discloses allowing the compiler to automatically instantiate an object being declared in the type declaration when the type declaration embedded with the object identifier declaration is first read by the compiler

Art Unit: 2122

(the purpose of a variable object definition in C++ is to instantiate an object of a particular class type before its use; see the first paragraph of “Defining Variable Objects” on page 58).

15. Claims 1, 11-16, and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by James Gosling and Henry McGilton, “The Java Language Environment, A White Paper,” May 1996, Sun Microsystems, Inc. (hereinafter *JLE*).

As per claim 1, *JLE* discloses a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine (inherently disclosed in discussion of the implementation of JAVA language programs; see, for example, subsection 4.1.1) to perform method steps for implementing an object type-declaration syntax, comprising: allowing a type declaration (class) in a programming language to be embedded within an object identifier declaration (see, for example, the declaration of the character variable “myChar” on page 14); and allowing the type declaration to be delimited from the object identifier declaration using a joint attribute (a space delimits the class from the variable name).

As per claims 11-14, *JLE* further discloses the joint attribute concatenated to the type declaration and the object identifier declaration concatenated to the joint attribute (the class and variable object identifier are both adjacent to the same delimiting space character; see, for example, the declaration of the character variable “myChar” on page 14).

As per claim 15, *JLE* further discloses the object identifier declaration including dynamically evaluated expressions (see, for example, subsection 10.1.5).

As per claim 16, *JLE* discloses a method of declaring an object type in a programming language, comprising: embedding an object type indicator with an object identifier name, wherein the object identifier name is interpreted by a machine as having the object type indicator (see, for example, the declaration of the character variable “myChar” on page 14).

As per claim 18, *JLE* further discloses joining the object type indicator with the object identifier with a joint symbol (a space delimits the class from the variable name; see, for example, the declaration of the character variable “myChar” on page 14).

As per claim 19, *JLE* further discloses allowing a type declaration in a programming language interpreter to be embedded within an object identifier declaration (JAVA employs an interpreter; see the first paragraph of subsection 4.1.1).

As per claim 20, *JLE* further discloses allowing an interpreter to operate on an object declared in the type declaration without an explicit call to construct the object (JAVA interpreters allow a value to be assigned to a variable within the type declaration without requiring a separate (explicit) type declaration; see, for example, the declaration of the variable “myFloat” with the initializing value of “3.14159” on page 22).

As per claim 21, *JLE* further discloses allowing an interpreter to automatically instantiate an object being declared in the type declaration when the type declaration embedded with the object identifier declaration is first read by the programming language (the purpose of a variable object definition in JAVA is to instantiate an object of a particular class type before its use; see subsection 3.3.2).

Claim Rejections - 35 USC § 103

16. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

17. Claims 3-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Staugaard* as applied to claim 1 above, and further in view of the ODBC 1.03 object interface developed by Konstantin Knizhnik and released September 14, 1999 as evidenced by the document file *readme.htm* (hereinafter *readme*) packaged and distributed with the software; the document "New products available," providing evidence of the product release date (see the seventh row listed on page 17); and the header files *cursor.h*, *connect.h*, and *query.h* packaged and distributed with the software.

As per claims 3-6 and 8, *Staugaard* discloses such a device (see the disclosure applied above to claim 1) but fails to expressly disclose the type declaration including a database object type, a SQL database object type, a connection database object type, a cursor database object type, or an environment object type. However, ODBC 1.03 is disclosed with and teaches such type declarations in a C++ implementation, including a database/SQL database object type (see, for example, the declaration of the *dbQuery*-type variable *q* on page 1 of *readme*), a connection database object type (see, for example, the declaration of the *dbConnection*-type pointer variable *connection* on page 2, line 13 of *cursor.h*), a cursor database object type (see, for example, the declaration of the *dbCursor*-type variables *contracts* and *suppliers* on page 1 of *readme*), and an

Art Unit: 2122

environment object type (see, for example, the declaration of the `dbQueryExpression`-type variable *expr* near the middle of page 4 of *readme*). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the product of *Staugaard* to include such database, cursor, connection, and environment object types as per the teachings of ODBC 1.03. One would be motivated to do so to gain the advantage of providing a flexible and convenient interface to relational databases for the C++ language.

18. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berners-Lee as applied to claim 1 above.

As per claim 10, although Berners-Lee discloses such an object type-declaration syntax for a hypertext markup language object (see above applied disclosure) but fails to expressly disclose a type declaration for an extensible markup language object. However, official notice is taken that it was well known at the time the invention was made to represent an extensible markup language object with an object type-declaration syntax comprising: an object identifier (for example, a web page address); an extensible markup language object type indicator (“xml” file extension); and a joint attribute associating the object identifier with the object type indicator (placing a dot “.” between the object type indicator (file extension) and the rest of the address). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the syntax of Berners-Lee to include a type declaration for an extensible markup language object. One would be motivated to do so because such a syntax has been known and used.

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Kiss whose telephone number is (703) 305-7737. The examiner can normally be reached on Tue. - Fri., 7:30 am - 5:00 pm. The examiner can also be reached on alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (703) 308-4789.

Art Unit: 2122

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, DC 20231

Or faxed to:

(703) 746-7239 (for formal communications intended for entry)

Or:

(703) 746-7240 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA, 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is (703) 305-
3900.

EBK/~~EBK~~
March 21, 2003


ANIL KHATRI
PRIMARY EXAMINER